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Integration of injured individuals into herds of African Savannah elephants (*Loxodonta africana*): field observations from Kenya and Botswana

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Introduction

Elephants, both Asian (*Elephas maximus*) and African (*Loxodonta* spp.), have long been known for their intelligence and complex social behaviour. This includes elephants helping each other in dangerous situations. For example elephants have been seen trying to lift an injured animal that has been shot (Laursen and Bekoff 1978 and references therein; Spinage 1994:132), protecting darted individuals (Douglas-Hamilton et al. 2006, K.E. pers. obs.), waiting for injured individuals (Spinage 1997), and trying to assist injured and/or dying individuals and showing interest in dead conspecifics (Douglas-Hamilton et al. 2006). This concern for distressed conspecifics is a trait found in humans and recorded in some other mammals including elephants, chimpanzees (*Pan troglodytes*), dolphins (*Tursiops truncatus*) (Dubzinskiet al. 2003, Douglas-Hamilton et al. 2006 and references therein) and African buffalo (*Syncerus caffer*) (K.E. pers. obs.).

In this short note, we report two instances of African Savannah elephants (*L. africana*) from Kenya and Botswana taking care of injured and/or mutilated individuals, which ultimately survived and became fully accepted members of the group.

Case 1: Aberdare Mountains, Kenya

In July 2013 F.E.Z. came across a herd of elephants in the Aberdare Mountains National Park in Kenya. A single bull was in the middle of a large clearing, and a group of cows and calves were nearby drinking at a water hole. An adult three-legged female elephant came limping out of the forest, joining the herd. The

lower part of her right hind leg was missing, but the wound had healed well, leaving a scarred stump (see Plates 4,5 and 6; centre page iii). She was moving easily but more slowly than the other elephants, and later they left the clearing together. The mutilated female seemed to be an ordinary member of the group, and interaction with the other animals was not different from any other interaction within the group. It is unknown what caused the injury (perhaps a poacher's snare or an inflammation), but the wound must have been life-threatening and extremely painful, and it is likely that during the time it was healing she would have been dependent on the help of the group. For example, the group must have been indulgent during movement and have waited for the injured cow. However, the habitat is mountain forest with clearings and easy year-round access to water, so unlike in dry areas such as Tsavo in southern Kenya or the Kalahari, no long-distance migrations are necessary. (Plates 4,5 and 6; see centre pages (iii)).

Case 2: Okavango Delta, Botswana

In April and May 2003 a female elephant of about 20–25 years, her four-year old male calf and a male calf of about eight months were repeatedly seen in the western Okavango Delta (Wildlife Management Area Ngamiland NG26). They were first sighted by K.E. on the morning of 3 April and it was noted that the youngest had a very swollen front left leg with an unusual angle to the knee and that his head had a fold of skin from the top of his ear and down the side of his face. They were sighted again that evening, when the calf kept falling over and was really struggling to remain upright. He was also exceptionally thin. The

mother or older calf stood over it or near it when it was sleeping/collapsed on the ground. At 19:30 h K.E. left the group and the calf was still lying on the ground. K.E. thought that the calf would die or be attacked and eaten by lions that night as a pride had been sighted in the area that day.

The next day the three elephants remained in the area and the baby was up but still struggling. The mother and older calf were very protective and again observations were done from afar and it was decided not to remain for long to avoid undue stress to the group. They were again sighted in the evening and the calf appeared to be in the same physical condition. They were seen again on 9 April, this time with four male elephants (two 21–25 year olds and two 10–15 year olds). All six were in a lagoon when first sighted; then the males left the lagoon followed by the female and her two calves. When they were out of the water the youngest calf kept falling over but was able to right himself and appeared much stronger.

On 14 April they were sighted by a large lagoon, drinking on the water's edge. The youngest calf now had diarrhoea. When the mother and 4 year old were ready to leave the lagoon the youngest was unable to follow as he had his front left foot stuck in the mud and could not get leverage with his swollen leg so kept falling over struggling to right himself for a long time. The mother returned to the calf, and gently backed into him but did not attempt to pull him up or out of the mud. Once he had managed to free himself, a herd of 21 elephants (including a male of 30–35 years) came down to the water. When some of the younger herd members came near the three, the four year old calf stood between them and his younger brother, apparently trying to keep them away, with his ears out, not charging or trumpeting but moving towards them if they got too close. Once they had lost interest and moved on to drink from the lagoon, the three left with the youngest limping badly.

They were seen again on the 1 May and for the last time on the 16 May 2003. On both these occasions just the three of them were seen.

It is unusual to see small groups of females and their calves apart from larger herds although similarly small groups were seen in the study area (K.E. unpubl. data). Usually a female as young as this and her calves would be members of a herd consisting of a number of related females and their calves (Douglas-Hamilton 1973; Fernando and Lande 2000). It was concluded that this young male was either born with these deformities or

was injured soon after birth, which severely affected his ability to move. His physical condition improved over the time that he was seen and he appeared to be struggling less to remain upright, however he was still slow and limped when motile. This would have affected his ability to remain with the pace of the herd and it would appear that the female decided to remove herself from her herd along with her older calf and younger calf moving at the youngster's pace.

These two observations in different populations of the African Savannah elephant provide more evidence of the social complexities of this species and the ability of individuals to empathise with others.

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